

DEC STD 185-0 Documentation of Computer Media in the Engineering Documentation System

DOCUMENT IDENTIFIER: A-DS-EL00185-00-0000 Rev E1, 08-Aug-1991

ABSTRACT: This standard describes how to identify and control the revision of computer media used in the design of Digital hardware products. It has been classified as Historical and is not to be used for developing new products.

APPLICABILITY: This standard has been classified as Historical and does not apply to computer media used in the development of new products.

STATUS: Classified Historical 08-Aug-1991.

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1 INTRODUCTION

1.1 PURPOSE

This standard has the following purposes.

- a. Provide a standard method for identification and revision control of computer-generated media considered to be part of engineering design information.
- b. Define how computer media relate to the hard copy documentation structures defined in *DEC STD 140-0 Documentation, Data, and Release Requirements for Printed-Wiring Boards, Modules, and Backplanes – Introduction*.
- c. Indicate how the computer media discussed in this standard relate to the release and control requirements of *DEC STD 140-6 Production Release Requirements for Printed-Wiring Boards, Modules and Backplanes*.
- d. Establish computer media as the master engineering documentation form (when applicable), for release and control purposes.
- e. Establish the responsibilities of groups within Design Services, Engineering Information, and Engineering Systems concerning the handling of this information.

1.2 SCOPE

This standard is limited to the identification and revision control of machine-readable magnetic media as it applies to engineering design information.

This standard does not define requirements for application files, programs, or CAD (computer-aided design) tools that do not become part of the design data base for products.

This standard does not define magnetic file formats, structures, or other factors that are the technical responsibility of software organizations.

1.3 RESPONSIBILITIES

1.3.1 Design Engineering

The maintenance and control of data base information in the Engineering Documentation System is the responsibility of design engineering.

1.3.2 Site Design/Service Groups

The Design/Service group at each design engineering facility is responsible for providing data base generation resources and releasing data base information to design libraries.

1.3.3 Site Design Libraries

The person responsible for document control at each site design library is responsible for assigning document identification numbers to data bases and interface files.

Each site design library is responsible for the on-site and off-site transfer, storage, and retrieval of computer media accepted as engineering documentation by the site Design/Service group.

1.3.4 CAD Engineering and Application

The CAD Engineering and Application organization is responsible for providing to engineering CAD tools that meet acceptance criteria. CAD tools developed at engineering sites that have not passed this group's acceptance tests will not be supported.

1.3.5 Design Engineers

Design engineers who generate data base information, using either Engineering Services Design/Service or other resources, are responsible for verification of data base accuracy.

When resources other than Engineering Services Design/Service groups are used, the output must comply with the format requirements of the appropriate data base specification and be released as engineering documentation in accordance with prescribed Engineering Services' processes and procedures.

2 GENERAL INFORMATION

Computer media are the physical forms of computer-generated information that have been output for storage, backup, or transmission and delivery to another user. Computer media are another way of recording information required to document an engineering design and to enable manufacture and field maintenance of the product. Computer media are DECtape, magnetic tape, paper tape, disks, diskettes, punched cards, and computer-generated hard copy listings.

Magnetic media are a specific form of computer media. The name implies magnetic storage techniques such as magnetic tapes, DECTapes, disks, and diskettes, and excludes paper tape, punched cards, and line printer or teletypewriter printouts or listings.

This standard recognizes the following basic uses or categories of magnetic media in product documentation.

- a. Data bases
- b. Interface files
- c. Soft tools
- d. Library files
- e. Special files

2.1 DATA BASES

A data base is a file or collection of files used to document and store master computer-generated source information on a specific product.

Data bases in the engineering documentation system are specifically designed to be source files for engineering design information.

When any new data base requirements are introduced into the engineering documentation system, the new requirements must be adequately documented in an appropriate specification or standard that is approved by both the originator and the intended users.

Data bases have the following unique properties.

- a. They are master definitions of a product.

- b. They can be updated (as opposed to the interface file, which is a read-only structure).

The relationship of hard copy documents to data bases is as follows.

Hard copy documents that are extracted from a specific data base, without additional line work or drafting effort, are considered part of the documentation package for that data base. Such hard copy documents are not mutually exclusive from that data base; if additional line work or drafting effort is required to produce the hard copy documentation, the resulting document becomes the master document and the data base is a subordinate part. Data bases will, in most cases, contain individual magnetic files that provide input data for plotting or printing a document.

Further, the data bases will contain additional data necessary for re-creating, post processing, and updating the data base.

2.2 INTERFACE FILES

An interface file is a file or collection of files extracted from a data base or combination of data bases for transmission to a user process.

The format and defined location where certain types of information are found in the interface file are fixed by agreement between the user and originator.

An interface file is unique in that it is strictly an extracted file and can be modified or changed only by change to the master data base(s) and the generation of a new extraction.

Interface files become a master read-only source of information for the organization that receives them.

It is the option of the receiving organization to retain and control this file for their continued use or to return it (or discard it) after the information required has been extracted. In the latter case, subsequent requirements will require reordering the interface file from the Engineering Services group responsible for that data.

If the receiving organization chooses to retain and control this file, an interface file is extracted and sent to the receiving organization after each data base change is released. There should be a one-to-one relationship between the data base and interface file revisions. If the interface file requires other inputs (such as library file inputs) in addition to the data base, then the revision level of each interface file must be traceable to the revision of the data base and library files from which it was created.

2.3 SOFT TOOLS

Soft tools are computer-generated information created to perform production operations in specific manufacturing facilities.

The source file for soft tool generation is normally an interface file. There may be special situations where the data base or library files must be the source of the soft tools.

2.4 LIBRARY FILES

Library files are data bases of widely used information residing at each site for use by Design Services and other users in generation of product-specific data bases, interface files, and soft tools.

Library file information is designed with any of the following applications in mind.

- a. Global
- b. Specific to a particular engineering group
- c. Process related

Library files are similar to previously described files in that:

- a. They serve as the master source of data and can be updated only by the organization that controls the files.
- b. They are read-only files, as is the case with interface files (subhead 2.2).

The version of the library file used should be referenced in an information file or control file in the engineering documentation data base; however, the actual file is not included as part of the engineering documentation. Refer to heading 4.

2.5 SPECIAL FILES

Special files are data base, interface, or soft tool files that are designed for a very specific application and do not fit into the categories defined in subhead 2.4. The requirements for special files are documented in a specification or standard for that file. Examples of special files are documented in *DEC STD 184-0 Programmable Integrated Circuit Documentation: Process and Requirements*.

3 REQUIREMENTS

3.1 IDENTIFICATION NUMBER

Data base and interface files and hard copy extractions shall be identified with a document identification number assigned by site design libraries.

3.1.1 Identification of Data Bases and Interface Files

The number assigned to data bases and interface files is determined using the numbering format and allowed field entries of *DEC STD 012-0 Part Identification Standard*, with the following preferred conventions.

X	-	XX	-	XXXXXXXX	-	XX	-	XXXX	REV	XXXX
a		b		c		d		e		f

- a. **K = Computer Generated Media** - This field indicates that the master documentation is contained on a magnetic medium.
- b. **Mnemonic Code - XX (2) Characters**

PC	=	Printed circuit data base
PL	=	Parts list data base (per <i>DEC STD 025-0 Parts Lists</i>)
IF	=	Interface file
MC	=	Microcode
GL	=	General Listing
SP	=	Specification
SU	=	Stanford University Drawing System (SUDS) data base

Refer to *DEC STD 012-1 Documentation Identification Conventions Including Mnemonic Codes* for a complete list of mnemonic codes.

- c. **Part Number, Class Code, and Main Field**

XXXXXXX:	7-digit drawing number (2-digit inventory class and 5-digit drawing identifier)
or optional	
XXXXX:	Up to 5-character name of finished product (with leading XX blank for the inventory class code)

- d. **Part Number Variation**

XX:	2-digit product variation (if required), 1-digit "0" entry if not required.
-----	---

- e. **Reference Identifier Field** - The 4-character reference identifier field is typically used to uniquely identify documents that have the same leading document identifiers. In magnetic media document identifiers, the reference identifier is also used to identify and differentiate the data bases.

Data Bases:

DBA	=	Applicon data base
DBC	=	Printed Circuit Design (or Wire Ink) data base - CALDEC
DBCA	=	CAE2000 data base
DBI	=	Printed Circuit/Integrated Circuit Design (or Wire Ink) data base - IDEA
DBG	=	Printed Circuit Design (or Wire Ink) data base - GEMS
DBW	=	Wirelist data base
DBP	=	Automated Parts List data base - KPL
DBS	=	SUDS data base
DBF	=	Word Processing data base
DBU	=	UNIGRAPHICS data base
DBK	=	Calma data base
DBD	=	Daisy data base

DBV = Printed Circuit / Integrated Circuit Design data base - VLS
 DBX = Valid/Scald data base
 DBJ = Printed Circuit/Secured

Interface Files:

MIFF = PC Design Interface File (MIF)
 WIF = Wirelist Interface File (WIF)
 IPF = Insertion Parts List File (IPF) (includes either IPL, SPL, or both)
 PDF = PC DESIGN Interface File

Microcode: Always zero

The last character of the reference identifier field is used when necessary to identify multiple data bases or interface files.

For example:

MIFL = MIF outer layers
 MIFM = MIF middle (inner) layers

- f. **Revision (REV XXXX)** - This field identifies the revision level of the physical data base or interface file (that is, the item labeled); not the revision of the hardware it produces. The letters REV appear before the actual revision except on drawing formats where the revision is clearly differentiated by blocked spaces.

NOTE

The Drawing Directory documents the relationship of the data base to the hardware and documentation revisions.

3.1.2 Identification of Hard Copy Extracted From a Data Base

The rules for identifying hard copy extracted (printed or plotted) from a data base depend on whether the data base is established for a specific document or multiple documents.

3.1.2.1 Specific Document Data Base

When the data base is established for one specific purpose and there is no apparent benefit to be gained by differentiating the data base from the physical extraction, the hard copy is identified by the data base identifier. For example:

Data Base Identifier	Hard Copy Identifier	Refer To
K-PL-XXXXXXXX-XX-DBP	K-PL-XXXXXXXX-XX-DBP	DEC STD 025-0
K-DD-XXXXXXXX-XX-DBF	K-DD-XXXXXXXX-XX-DBF	DEC STD 024-1

3.1.2.2 Multiple Document Data Base

When the data base is designed to provide two or more documents, each hard copy document extracted from the master data base must be identified to differentiate between the hard copy extractions and the master data base.

The differentiation can be accomplished by assigning a different document mnemonic (by DEC STD 012-0 or WP, versus CS, UA, PC, and so on) or a different reference identifier.

The rules for these assignments are:

- a. **Mnemonic Code**—Use the appropriate mnemonic listed in subhead 3.1.1.b for the software system used to create the data base; use the document mnemonic appropriate for each drawing on each hard copy drawing extracted from the data base.
- b. **Reference Identifier**—Use the reference identifier field to differentiate between two or more hard copy extracts only when the master data base media code is K and a unique software system mnemonic code is assigned. If the master data base identifier does not comply with the above conditions, then the reference identifier field is limited to the specific data base codes listed in subhead 3.1.1.e.
- c. **Media Code**—Use K for the master data base identifier to identify plots.

3.1.3 Revision Sequence

The revision sequence for document identifiers of both data bases and extracted documents shall be in accordance with the requirements of DEC STD 012-0.

3.1.4 Identification of the Physical Magnetic Media

The physical magnetic media that contains the data base(s) must be labeled on the outside of the diskette, disk, magnetic tape, or DECTape reel in accordance with the requirements of *DEC STD 188-0 Archiving Engineering Information: Policy and Procedures*.

If there is a special format required for the physical label not covered by DEC STD 188-0, it shall be documented as part of the specification or standard for that particular data base.

3.2 REVISION IDENTIFICATION AND CONTROL

3.2.1 Drawing Directory Data Base Control

The Drawing Directory (DD) is the controlling document for revision identification and control of data bases and related document extractions in the Engineering Documentation System. This document identifies revision history relationships between:

- a. The hardware revision, at the module, backplane, or other assembly level
- b. The DD drawing revision
- c. The physical magnetic media revision for each data base
- d. The revisions of related document extractions

Use the DEC Form DRB 126A Drawing Directory in accordance with *DEC STD 024-1 Top Document Requirements—DRB 126C Format*

DEC STD 012-0 provides the specific requirements for Drawing Directory application in the module documentation structure.

Hard copy documents that are extractions of a specified data base are referred to in the Drawing Directory in addition to the data base. When the identification numbers for the data base and document are the same, only the data base is listed.

For example:

The Automated Parts List data base is an example of a data base identifier that is identical to the extracted document.

K-PL-XXXXX-0-DBP

For example:

The SUDS data base for two unique schematics (not sheets) is an example of a data base and extracted documents that have to be listed in a directory.

K-SU-XXXXX-0-0 Data base

K-CS-XXXXX-0-FLC1 Schematic 1

K-CS-XXXXX-0-FLC2 Schematic 2

3.2.2 Interface Files

Interface files are not referenced on the module Drawing Directory because of the one-to-one relationship between the data base and interface file.

The interface file shall always reference the applicable corresponding data base and other input file revisions (if applicable) as part of its contents.

The interface file may also reference the corresponding manufacturing document that contains the manufacturing soft-tooling revision information for the product being documented when this information is requested for inclusion by manufacturing. This requirement should be included in the interface file specification. Refer to heading 4.

3.3 COMPUTER MEDIA RELEASE/CHANGE PACKAGE

Computer media release or changes occur in accordance with the requirements of *DEC STD 100-0 Policy and Requirements for the Product Change Process*.

The release or change package consists of the following items, as a minimum.

- a. Drawing Directory (subhead 3.2.1).
- b. The data base and, if necessary, the corresponding interface file on magnetic media labeled and identified in accordance with subheads 3.1.1 and 3.1.4.
- c. A hard copy listing of the first file on each data base (that is, information file per heading 4) when this file contains information necessary for processing or recreating the data base. For example, SRC file for CALDEC data bases.
- d. A hard copy of the information file is required as a backup in case there are problems copying the tape, and will be used as an abstract of the file contents for index purposes. The hard copy backup is stored by the site design library.
- e. A copy of the ECO (for changes).

- f. An Engineering Services Work Request and a Document Release Form, EN-01132-16, signed by the design engineer. See the site Design/Drafting representative for these forms.

The Document Release Form, EN-01132-16, itemizes the contents of the release package and is used as a receipt for transfer of the package to the areas required by *DEC STD 140-6 Production Release Requirements for Printed-Wiring Boards, Modules, and Backplanes*.

3.4 COMPUTER MEDIA CHANGE CONTROL

Once computer media information is signed off and accepted by the site design library, it can only be changed by ECO procedures, as described in DEC STD 100-0. The ECO procedure to be used for data base and interface files is limited to activity involving replacement of the complete existing package with a new complete package (that is, new releases at a higher revision).

4 GENERAL GUIDELINES FOR THE STRUCTURE OF ENGINEERING INFORMATION DOCUMENTED ON MAGNETIC MEDIA

In general, the format and structure of data bases, interface files, and libraries required in the generation and documentation of engineering design information will be defined by joint agreement of the user and originator before the information is released to the engineering documentation system.

The following guidelines are recommended for designing the structure and format of data base or interface files. These guidelines are intended to:

- a. Permit uniform revision control techniques.
- b. Provide compatibility with existing release and change processes in Design Services.
- c. Ensure that the data base or interface file includes all the information necessary to make that data base or file understandable and supportable by someone other than the originator.

4.1 DATA BASE AND INTERFACE FILE STRUCTURE

Data base and interface file information should include all information required for processing and working with the file to produce the element the file is describing, whether directly or by reference to the library.

The data base and interface files documented on magnetic media should have the characteristics defined/described in subheads 4.2 through 4.6.

4.2 DOCUMENT IDENTIFICATION

The media are identified with a document identification number in the numbering format of DEC STD 012-0 using the conventions specified in this standard (see subhead 3.1.1).

4.3 FILE ARRANGEMENT

The contents of each data base and interface file should be arranged using a multifile concept, where a separate file is used to document each unique section of information.

4.4 INFORMATION FILE

One of the files (preferably the first file) should be an information file in ASCII text format. It should contain all the essential information about the medium and its contents that are required to understand and support this package. Examples of typical data to be found in this file are:

- a. Document identification number of the data base/interface file (subhead 3.1).
- b. The name of the responsible engineer at the time of release.
- c. The standard finished product names in which this medium is used.
- d. Media processing information:
 1. Name of the program and version used to generate the files
 2. Format: ASCII, binary or mixed (with files specified)
 3. 1600, and so on, BPI (bits per inch)
 4. Type of magnetic labeling (if used)
- e. A list of all the files in this document and the applicable variations and revision information for each one (that is, a table of contents).
- f. A description of each file.
- g. Any special instructions or information required to work with, understand, or aid in the processing of an ECO pertaining to this file and the element it is describing.

Because the content of an information file varies depending on the type of information (for example, data base or interface file), type of data (for example, MIF or WIF), and the user of the data, it is essential that the format and requirements for the file be documented in the specification or standard for the data base or interface file.

Existing data base or interface file structures that do not have provisions for multifile structures and a separate information file should include references and recommended procedures for providing information file type data as part of the specification or standard for the data base or interface file.

4.5 FILE NAME ASSIGNMENT CONVENTIONS

The file name assignment conventions for files within data bases and interface files shall be documented in the Digital standard—or in the support document or user manual for the CAD tool used to create that data base or interface file. File name conventions should be based upon mutual agreement between the originating organization and users.

4.6 FILE NAME FORMAT

The following (XXXXXX).(XXX) file name format, commonly used with printed circuit and wirewrap design tools, is recommended when defining the file name conventions.

XXXXXX	X	XXX
-----"	-	."-----
A	B	C

where:

A = (XXXXXX) 5 characters

The finished product name or option designation used, or a reasonable facsimile agreed to by the responsible engineer.

B = (X) 1 character

Revision of this specific file starting with A and running alphabetically through Z. Beyond Z, a new variation of the 5-character name will be necessary.

C = (XXX) 3 characters

File descriptor and extension that describes the specific purpose or type of file. The descriptor designations should be standardized between all users and originators of the data base and interface files and related soft tools. For example: SUDS: .DRW, Appicon: .DRG.

When creating new extensions, standardization should be limited to the first two characters where possible. This allows the last digit to be used for assignment of multiple files within one descriptor and for applications where the (XXXXXX).(XXX) format cannot be used (that is, PDP-8 (XXXXXX).(XX) format).

Other file name conventions (instructional subsets of this standard directed toward SUDS and UNIGRAPHICS) are described in *DEC STD 185-1 Requirements for Releasing UNIGRAPHICS Data Bases*.

Table 1 lists the file extensions standardized for use by Design Services site Design/Service groups and users. As additional standardized file extensions are required, they will be documented.

4.7 DATA BASE AND INTERFACE FILE CONCEPT

The data base/interface file concept in this standard is based on the premise that:

- a. Whenever any file in the data base changes, the complete data base (and all its files) will be replaced or regenerated, making it a release at a higher revision.
- b. Whenever a data base changes, a new interface file (with all its files) is automatically generated. The new file ensures a one-to-one relationship between the data base and the corresponding interface file.

5 STANDARD FILE EXTENSIONS FOR MAGNETIC MEDIA IN ENGINEERING DOCUMENTATION

Previous file extension naming conventions have differed between the various Design Services groups. Consequently, there is some degree of confusion to Digital users. Now, with more groups established through decentralization, these extension names must be standardized to ensure consistency and a baseline of communications between these groups. Table 1 lists the file extensions to be used by all groups that use CAD tools for creation of engineering or manufacturing data.

The following notes define the codes and symbolic representation used in Table 1.

NOTES

- a. **File names denoted with an asterisk (*) may use the third character as a wild card character to indicate variations of the file. File names without the asterisk (*) must use the file name to denote file variations.**
- b. **File names that have an underline (_) as the third character have the revision of the file plugged into this spot.**

c. **Chart Codes:**

1. **File Type:**

A	=	ASCII
B	=	BINARY

2. **Group Codes:**

ES	=	Engineering Services
MTG	=	Manufacturing Tool Generation
MFG	=	Manufacturing
ESP	=	Document Control/Micropublishing Microfiche Educational Services Development and Publishing

3. **Engineering System Category**

WW	=	Wirewrap
PC C	=	Printed Circuit Design Caldec
PC G	=	Printed Circuit Design Gems
PC I	=	Printed Circuit Design Idea
PC J	=	Scicard
PC V	=	Printed Circuit Design - VLS
S	=	SUDS
X	=	Valid
ALL	=	Applies to all systems

Table 1 will be updated to include additional file extensions as the data becomes available.

Table 1: Standard File Extensions (Sheet 1 of 4)

FILE EXT.	DES. SYS.	DESCRIPTOR	FILE TYPE	SORT TYPE	PROGRAM CREATED BY	PROGRAM(S) USED BY	GROUP(S) CREATED BY	GROUP(S) USED BY
ADD	WW	Computerized add/delete sheet	A	N/A	ECO	N/A	ES	ES
ADS	WW	Computerized add/delete sheet	A	N/A	GEPITS	GLUP	ES	ES/MTG
ADS	V	VLS – Archive data structure	A	N/A	ADSWRITE	ADSREAD	ES	ES/MTG MFG
ALL	WW	ALL connections listing file	A	RUN NAME	WTP	N/A	ES/MTG	ES/MTG MFG
ALT	WW	ALL connections test file	B	N/A	WTP	N/A	ES/MTG	MFG
ASG	WW	Contains all slot/library assignment information for variable geometry slots.	A	N/A	TECO	VGWRAP VGCHK VGTWP	ES	ES
ATP	WW	After TWP listing file	A	RUN NAME	AWT	N/A	ES/MTG	ES/MTG MFG
AWT	WW	Wiring and bussing listing file – used for jobs that have no etch or TWP.	A	RUN NAME	AWT	N/A	ES/MTG	ES/MTG MFG
BGD	WW	Binary file for Gardner–Denver wirewrap data creation for straight or 30GA wiring	B	N/A	WRAPD/VG	FRAP/VG	ES	ES/MTG
BNC	WW	Binary file for semiautomatic (NC) wirewrap data creation for straight or 30GA wiring	B	N/A	WRAPD/VG	FRAP/VG	ES	ES/MTG
BTL	WW	Before TWP listing file	A	RUN NAME	WTP	N/A	ES/MTG	ES/MTG MFG
BTP	WW	Before TWP listing file	A	RUN NAME	AWT	N/A	ES/MTG	ES/MTG MFG
BTT	WW	Before TWP test file	B	N/A	WTP	N/A	ES/MTG	MFG
BUS*	WW	Describes by pin names all horizontal bus strips on a back panel assembly	A	N/A	TECO	AWT WTP	ES	ES/MTG
CDS	WW	Correction format file for ECO	A	PIN NAME	TECO WRL	ECO	ES	ES
CTL	ALL	BATCH processing file. Con- tains both monitor and software commands essential to performing specific functions. Will also be used as documentation file	A	N/A	TECO	BATCH	ES/MTG	ES/MTG
DAT	X	Valid data	A	N/A	N/A	N/A	ES	ES
DBJ	J	Scicard	B	N/A	N/A	N/A	ES	ES/MTG
DF_	WW	Semiautomatic from/to pin list- ing for differential TWP wiring	A	PIN NAME	FRAP/VG	N/A	ES/MTG	ES/MTG MFG
DIF	WW	Contains pin data for differential TWP – shows both pin connects for each end of each TWP wire	A	N/A	WRAPD/VG	TWP/VG	ES	ES

Table 1: Standard File Extensions (Sheet 2 of 4)

FILE EXT.	DES. SYS.	DESCRIPTOR	FILE TYPE	SORT TYPE	PROGRAM CREATED BY	PROGRAM(S) USED BY	GROUP(S) CREATED BY	GROUP(S) USED BY
DIR	S	Contains a directory of files SUDS data base						
DRW	S	Contains the library or drawing information in SUDS data base – used to input plotters for output						
DSC*	WW	Contains job title, revision, and describes the physical size and limitations of the wirewrap unit	A	N/A	TECO	WRAPD/VG TWP/VG DISTRIB GEPITS/VG	ES	ES/MTG
DST	WW	Expanded simple formatted file	A	N/A	DSTRIB	WRL	ES	ES
DP_	WW	Semiautomatic wirewrap data file for differential TWP wiring	B	WIRE LENGTH Z LEVEL	FRAP/VG	N/C MACHINE	ES/MTG	MFG
DW_	WW	Semiautomatic wirewrap listing file for differential TWP wiring	A	WIRE LENGTH Z LEVEL	FRAP/VG	N/A	ES/MTG	ES/MTG MFG
EBL	WW	Etch and bussing listing file	A	RUN NAME	WTP	N/A	ES/MTG	ES/MTG MFG
EBT	WW	Etch and bussing wiring test file used to test the panel before any wires are added	B	N/A	WTP	N/A	ES/MTG	MFG
ERR	WW	Error file certain error types. Error can be specified with switches or can be created auto- matically, if library errors occur in VGWRAP.	A	RUN NAME	WRAPD/VG	N/A	ES	ES
ETH	WW	Etch only listing file	A	RUN NAME NAME	AWT	N/A	ES/MTG	ES/MTG MFG MFG
ETL	WW	Etch only listing file	A	RUN	WTP	N/A	ES/MTG	ES/MTG
ETT	WW	Etch only test file	B	N/A	WTP	N/A	ES/MTG	MFG
ETW	WW	Etch and wiring listing file used for jobs that have no TWP	A	RUN NAME	AWT	N/A	ES/MTG	ES/MTG MFG
GD_	WW	Gardner-Denver wirewrap data file for straight or 30 GA wires	B	WIRE LENGTH Z LEVEL	FRAP/VG	GD MACHINE	ES/MTG	MFG
GEP	WW	Name sorted file used computerized to create add/ delete file (ADS)	A	RUN NAME	GEPITS	WRAPD/VG	ES	ES
GF_	WW	Gardner-Denver from/to pin listing for discrete wiring	A	PIN NAME	FRAP/VG	N/A	ES/MTG	ES/MTG MFG
GLP	WW	Computerized add/delete file (ADS) w/gnd assignments and wire lengths	A	N/A	GLUP	N/A	ES/MTG	ES/MTG

Table 1: Standard File Extensions (Sheet 3 of 4)

FILE EXT.	DES. SYS.	DESCRIPTOR	FILE TYPE	SORT TYPE	PROGRAM CREATED BY	PROGRAM(S) USED BY	GROUP(S) CREATED BY	GROUP(S) USED BY
GNP*	WW	Describes all ground pins if they are not shown in the WRL or NAM file.	A	PIN NAME	WRL	AWT/WTP	ES	ES/MTG
GW_	WW	Gardner-Denver wirewrap listing file for straight or 30GA wiring	A	WIRE LENGTH Z LEVEL	FRAP/VG	GLUP	ES/MTG	ES/MTG MFG
HF_	WW	Semiautomatic from/to pin listing file for straight or 30GA wiring	A	PIN NAME	FRAP/VG	N/A	ES/MTG	ES/MTG MFG
HW_	WW	Semiautomatic wirewrap listing file for straight or 30GA wiring	A	WIRE LENGTH Z LEVEL	FRAP/VG	GLUP	ES/MTG	ES/MTG MFG
INF	A	Information file that contains all parameters necessary to re-create all work with the other data in a data base						
JMP*	WW	Describes all hand wiring or vertical bus strips	A	PIN NAME	WRL	AWT WTP	ES	ES/MTG
LEP	WW	Compressed file used to edit WL for special runs	A	PIN NAME	LEPOTG	WRL	ES	ES
LG	ALL	Same as LOG but renamed for storage on a data base magtape	A	N/A	PIP	N/A	ES/MTG	ES/MTG
LOG	ALL	Record of all processing system did during a BATCH run	A	N/A	BATCH	N/A	ES/MTG	ES/MTG
NAM	WW	Expanded format source file	A	RUN NAME	WRL ECO	ECO WRL WRAPD/VG GEPITS/VG	ES	ES
NC_	WW	Semiautomatic wirewrap data file for straight or 30GA wires	B	WIRE LENGTH Z LEVEL	FRAP/VG	N/C MACHINE	ES/MTG	MFG
PIN	WW	Pin sorted source file	A	PIN NAME	WRL	WRL	ES	ES
PKG	WW	Contains component x,y coordinates and pin names for all variable geometry components.	A	N/A	TECO	VGWRAP VGCHK VGTWP	ES	ES
PLC	WW	Contains x,y coordinates for pin #1 of each variable geometry slot.	A	N/A	TECO	VGWRAP VGCHK VGTWP	ES	ES
PLT	WW	Plot file used for checking VG libraries	A	N/A	VGCHK		ES	ES
PSV	WW	Pin sort, vertical file with header format	A	PIN NAME	WRL	N/A	ES	ES/MTG MF
PWL	WW	Etch and PWR wiring listing file	A	RUN NAME	WTP	N/A	ES/MTG	ES/MTG MFG

Table 1: Standard File Extensions (Sheet 4 of 4)

FILE EXT.	DES. SYS.	DESCRIPTOR	FILE TYPE	SORT TYPE	PROGRAM CREATED BY	PROGRAM(S) USED BY	GROUP(S) CREATED BY	GROUP(S) USED BY
PWT	WW	Etch and PWR wiring test file – used when these connects are called out in the BUS and JMP files and not the WL file	B	N/A	WTP	N/A	ES/MTG	MFG
SMP	WW	Simple formatted source file	A	N/A	SIMPLE	DSTRIB	ES	ES
TF_	WW	Semiautomatic from/to pin listing for TWP wiring	A	PIN NAME	FRAP/VG	N/A	ES/MTG	ES/MTG MFG
TP_	WW	Semiautomatic wirewrap data file for TWP wiring	B	WIRE LENGTH Z LEVEL	FRAP/VG	N/C MACHINE	ES/MTG	MFG
TP8	WW	Input file for use with Taper 8 program on PDP8	A	RUN NAME	WRL	N/A	ES	ES/MTG
TRN	WW	Translation table of backplane pin to corresponding Automatic Wire Tester pin locations	A	N/A	TECO	WTP	ES	ES/MTG
TW_	WW	Semiautomatic wirewrap listing file for TWP wiring.	A	WIRE LENGTH Z LEVEL	FRAP/VG	GLUP	ES/MTG	ES/MTG MFG
TWP	WW	Binary input file for semi-automatic (NC) wirewrap data creation for TWP wiring. Both signal/Gnd and signal/signal (differential) are included in this file.	B	N/A	TWP/VG	FRAP/VG TWP/VG	ES	ES/MTG
WDS	V	VLS – Working data structure	B	N/A	VOS	VOS	ES	ES
WL	WW	Header/formatted reference and input file. Contains run ordering, wrap levels and wire length data. (Wirelist)	A	RUN NAME	WRAPD/VG	ECO TWP/VG AWT WTP LEPOTG GEPITS/VG DSTRIB	ES	ES/MF MTG
WNL	WW	Name sorted reference file with header format (TAPER8)	A	RUN NAME	WRL	N/A	ES	ES/MTG
WRL	WW	Compressed format source file	A	N/A	TECO SIMPLE	WRL DISTRB	ES	ES

APPENDIX A REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00012-00	<i>DEC STD 012-0 Part Identification Standard</i>
EL-00012-01	<i>DEC STD 012-1 Documentation Identification Conventions Including Mnemonic Codes</i>
EL-00024-01	<i>DEC STD 024-1 Top Document Requirements - DRB 126C Format</i>
EL-00025-00	<i>DEC STD 025-0 Parts Lists</i>
EL-00100-00	<i>DEC STD 100-0 Policy and Requirements for the Product Change Process</i>
EL-00140-00	<i>DEC STD 140-0 Documentation, Data, and Release Requirements for Printed-Wiring Boards, Modules, and Backplanes — Introduction</i>
EL-00140-06	<i>DEC STD 140-6 Production Release Requirements for Printed-Wiring Boards, Modules, and Backplanes</i>
EL-00184-00	<i>DEC STD 184-0 Programmable Integrated Circuit Documentation: Process and Requirements</i>
EL-00185-01	<i>DEC STD 185-1 Requirements for Releasing UNIGRAPHICS Data Bases</i>
EL-00188-00	<i>DEC STD 188-0 Archiving Engineering Information: Policy and Procedures</i>

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A.2 Other Digital Documents

Document Number	Document Title
EN-01132-16	<i>Document Release Form</i>

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